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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/058,141	01/29/2002	Masayoshi Imoto	111835	7766

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EXAMINER

PRITCHETT, JOSHUA L

ART UNIT PAPER NUMBER

2872

DATE MAILED: 03/18/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/058,141

Applicant(s)

IMOTO, MASAYOSHI

Examiner

Joshua L Pritchett

Art Unit

2872

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-17 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-17 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 18 March 2002 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on ____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 5,6.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). ____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1 and 9-17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sakata (JP 10-229512) in view of Ichikawa (US 5,838,504).

Regarding claim 1, Sakata teaches an apparatus for watching around a vehicle comprising a casing (4) on the outer side of the vehicle (Fig. 11) and having a pair of right and left transmission window portions (4a-b) on either side of the casing. Sakata further teaches a prism (1) in said casing in the form of a triangle (Fig. 1) with a vertical angle directed to a front part of the casing, the right and left sides of the prism which correspond to the equal sides of the triangle being directed to the respective right and left transmission window portions. Sakata further teaches an imaging element disposed to the rear of the prism and used for converting a ray of light into an image signal (example image signal Fig. 12) by concentrating light on an imaging plane (13) via an imaging lens (3), the ray of light being incident on one of the right and left sides of the prism, reflected from the other side of the prism and emitted from the rear side of the

prism (Fig. 1). Sakata lacks the claimed isosceles triangle shape. However, it has been determined that it is within the skill of one ordinarily trained in the art to facilitate a change in shape. One would have been motivated to change the shape of the prism to reduce the size of the apparatus, because a smaller rear surface of the prism would allow the apparatus to be narrower and would also increase the viewing angle of the apparatus toward the rear portion of the vehicle. Sakata also lacks a means to prevent internal reflection of the incident light. Ichikawa teaches the use of black paint as a means of preventing internal reflection of incident light within a prism (col. 5 lines 35-38). It would have been obvious to a person of ordinary skill in the art at the time the invention was made to make the Sakata prism in the shape of an isosceles triangle and to add the black paint as a means to prevent internal reflection as taught by Ichikawa for the purpose of reducing the amount of harmful light transmitted to the viewer.

Regarding claims 9 and 10, Sakata teaches the invention as claimed but lacks reference to the use of a light scattering plane to prevent internal reflection. Ichikawa teaches the use of a light scattering plane in a prism to prevent internal reflection (col. 1 line 66 – col. 2 line 3). Ichikawa further teaches adding black paint to the light scattering plane to absorb light (col. 5 lines 35-38). It would have been obvious to a person of ordinary skill in the art at the time the invention was made to use the light scattering plane and black paint taught by Ichikawa in the Sakata prism for the purpose of reducing the amount of harmful light that reaches the viewer.

Regarding claims 11-13 and 17, Sakata teaches the invention as claimed but lacks reference to the use of light absorbing means to reduce internal reflection. Ichikawa teaches the use of a black paint as a light absorbing means to reduce internal reflection (col. 5 lines 35-38). It would have been obvious to a person of ordinary skill in the art at the time the invention was

Art Unit: 2872

made to use the black paint as taught by Ichikawa as a light absorbing means to reduce internal reflection in the Sakata prism for the purpose of reducing the amount of harmful light that reaches the viewer.

Regarding claim 14, the claim limitations from claim 14 that match the limitations of claim 1 are rejected for the same reasons. Additionally, Sakata teaches the corner portions (14) of the prism being cut (Fig. 10). The cut of the corner portions of the Sakata prism would decrease the horizontal viewing angle by eliminating the incident angles that would properly reflect through the rear portion of the prism.

Regarding claims 15 and 16, Sakata teaches the invention as claimed but lacks reference to the use of a light scattering plane to prevent internal reflection. Ichikawa teaches the use of a light scattering plane in a prism to prevent internal reflection (col. 1 line 66 – col. 2 line 3). Ichikawa further teaches adding black paint to the light scattering plane to absorb light (col. 5 lines 35-38). It would have been obvious to a person of ordinary skill in the art at the time the invention was made to use the light scattering plane and black paint taught by Ichikawa in the Sakata prism for the purpose of reducing the amount of harmful light that reaches the viewer.

Claims 2-4 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sakata in view of Ichikawa as applied to claim 1 above, and further in view of Matsumoto (JP 07-082510).

Sakata in combination with Ichikawa teaches the invention as claimed, but lacks reference to a relationship between the refractive indices of the prism and the internal reflection prevention means. Ichikawa teaches that glass is a commonly known and used material in the creation of prism (col. 4 lines 35-36). Glass is known to have a refractive index of

Art Unit: 2872

approximately 1.4. Matsumoto teaches a black paint that has a refractive index of at least 1.7 (claim 2). The refractive index of the Matsumoto black paint is greater than 0.766 or 0.9 times the refractive index of glass. It would have been obvious to a person of ordinary skill in the art at the time the invention was made to use the Matsumoto black paint as the internal reflection prevention means in the Sakata prism for the purpose of absorbing light to reduce the amount of harmful light that reaches the viewer.

Claim 5 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sakata in view of Ichikawa as applied to claim 1 above, and further in view of Kadodura (US 6,147,821).

Sakata in combination with Ichikawa teaches the invention as claimed but lacks reference to the use of an adhesive member as internal reflection prevention means. Kadodura teaches the use of an antireflective mask (6) that adheres to the prism to prevent internal reflection (col. 2 lines 6-10). Kadodura further teaches a buffer (4) between the prism and the casing. It would have been obvious to a person of ordinary skill in the art at the time the invention was made to use the antireflective mask as taught by Kadodura to prevent internal reflection in the Sakata prism for the purpose of reducing the amount of harmful light that reaches the viewer.

Claims 6-8 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sakata in view of Ichikawa and Kadodura as applied to claim 5 above, and further in view of Matsumoto.

Claims 6-8 are rejected for the same reasons as claims 2-4 mentioned above.

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Ishii (US 4,634,233) teaches a means of controlling internal reflection.

Simmons (US 4,525,034) teaches a means of controlling internal reflection

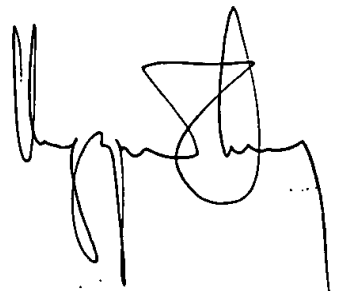
Negishi (US 4,004,851) teaches a means of controlling internal reflection.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Joshua L Pritchett whose telephone number is 703-305-7917. The examiner can normally be reached on Monday - Friday 7:00 - 3:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Cassandra Spyrou can be reached on 703-308-1687. The fax phone numbers for the organization where this application or proceeding is assigned are 703-872-9318 for regular communications and 703-872-9319 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-0956.

JLP
February 27, 2003

A handwritten signature in black ink, appearing to read 'Joshua L. Pritchett', with a stylized, overlapping loop at the end.